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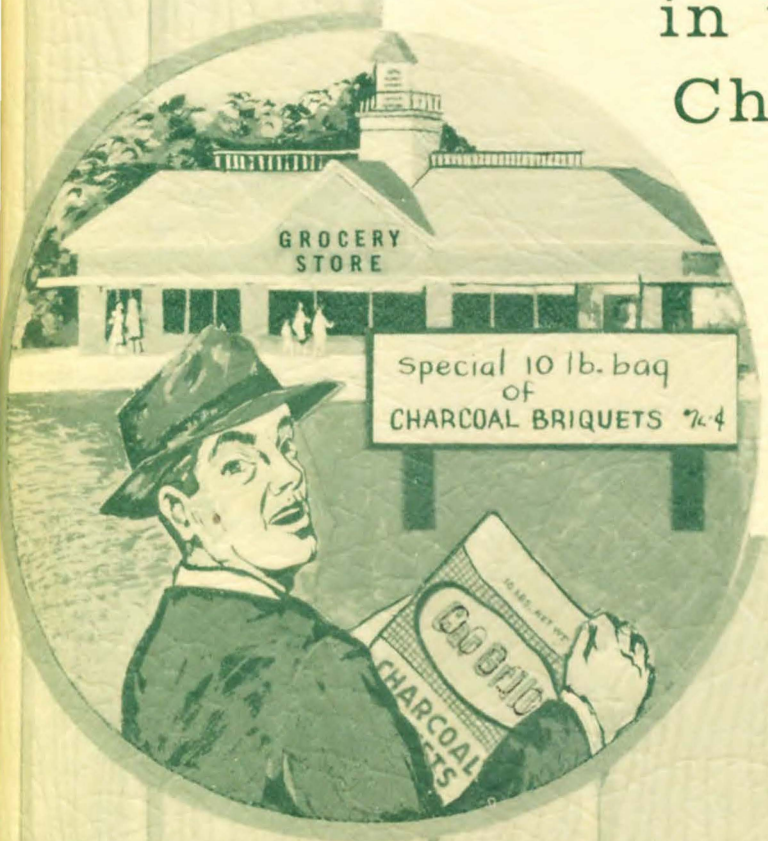
FOREST PRODUCTS MARKETING

TRENDS
in the Wisconsin Charcoal Market



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U. S. DEPARTMENT OF AGRICULTURE

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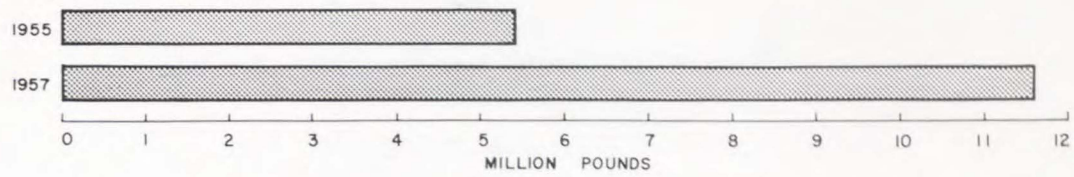
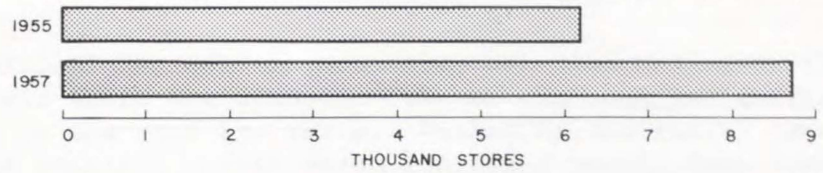
CHARCOAL
SURVEY HIGHLIGHTS

BETWEEN 1955 & 1957

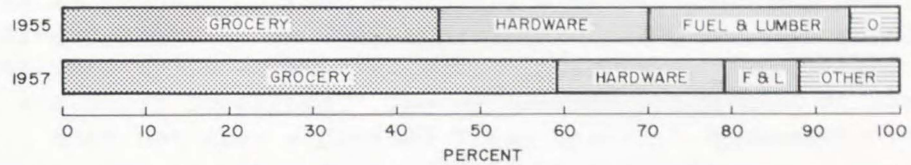
Retail charcoal sales doubled in Wisconsin



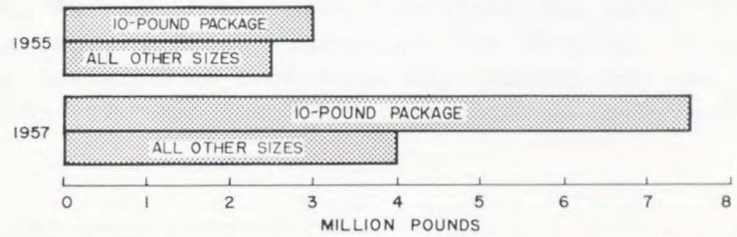
The number of retail stores handling charcoal increased 38 percent



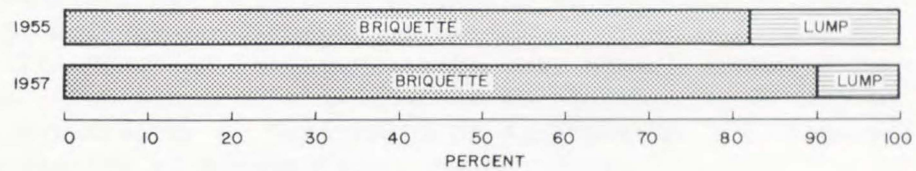
Grocery stores increased their lead in sales volume over other store types



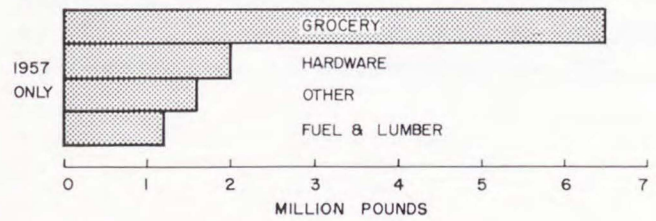
The sale of 10-pound-packages increased from 52 to 65 percent of total volume



Briquette sales increased from 4.6 million to 10.6 million pounds



Grocery wholesalers replaced fuel and lumber wholesalers as major distributors



Trends in the Wisconsin Charcoal Market

by

John R. Warner[1/] and Burton L. Essex[2/]

Introduction

The national increase in home charcoal consumption is typified in Wisconsin where the domestic[3/] use of charcoal has increased dramatically in the past few years. Pushed by the rising popularity of outdoor cooking, retail sales increased nearly four times between 1954 and 1957. Closely paralleling this rise in consumption is the increase in production from Wisconsin's kilns. In 1953 not one plant was making charcoal. In 1957 approximately 14½ million pounds of charcoal were produced at many small kilns newly established at widely scattered locations. The nationwide production of charcoal, however, does not show a decided trend upward. Apparently the increase in domestic use is being counteracted by a decrease in industrial use.

Charcoal is one of the uses for which low-value trees and cull material are admirably suited. Therefore the Station, as part of a research program designed to encourage the removal and use of such material, has twice surveyed the Wisconsin charcoal market.[4/]

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2/ Research Forester at the Lake States Forest Experiment Station. The Station is maintained at St. Paul 1, Minn., by the Forest Service, U. S. Department of Agriculture, in cooperation with the University of Minnesota.

3/ Refers to charcoal used for nonindustrial purposes such as indoor and outdoor cooking.

4/ The authors are grateful to the Station's Wausau Research Center for assistance in collecting the 1957 data for this study.

The first survey was completed in 1955, and results were published in Station Paper 46.[5] Results of the 1957 survey are presented here along with comparable material from the original study.[6] In this report are shown: The amount of charcoal retailed by various city sizes; the amount sold by different types of retail stores; the amount supplied retailers by the various wholesale sources; and consumers' preference for charcoal form and package size.

The 1957 survey results are based on data collected from all stores selling charcoal in 38 towns in Wisconsin and in nine 56-block segments in Milwaukee. The study methods are described in some detail in Appendix A.

The report stresses the years 1955 and 1957 because these are the years for which current data were gathered. The 1954 and 1956 data were based on year-old estimates made by the retailers interviewed at the end of 1955 and 1957.

Total Charcoal Sales, 1954-57

Wisconsin retailers increased their charcoal sales about 280 percent between 1954 and 1957. How long this rate of growth will continue is speculative; there is still no evidence that it is slowing down.

Year	Volume of charcoal (thousand pounds)	Annual growth (percent)	Cumulative growth (percent)
1954	3,100	-	-
1955	5,500	77	77
1956	7,000	27	126
1957	11,700	67	277

5/ Warner, John R., and Lord, William B. The Market for Domestic Charcoal in Wisconsin. U. S. Forest Serv., Lake States Forest Experiment Station, Sta. Paper 46, 15 pp., illus. 1957.

6/ Data for the earlier survey differ slightly in this report from those published in Station Paper 46. A different and more accurate method was used to compute the number of stores selling charcoal in 1957. This new method was then applied to the 1955 data to make the results for the two surveys comparable.

Charcoal Sales By Retail Store Type

Between 1954 and 1957 nearly all retail store types showed an increase in number of stores selling charcoal. The major exceptions were fuel and lumber, and hardware dealers (table 1).

Table 1.--Number of stores selling packaged charcoal in Wisconsin by type of retail store, 1954 through 1957

Retail store type 1/	1954		1955		1956		1957	
	Number of stores	Percent	Number of stores	Percent	Number of stores	Percent	Number of stores	Percent
Grocery, chain	2,861	47	3,224	51	564	9	805	9
Grocery, independent					2,582	41	3,654	42
Hardware	1,727	29	1,618	26	1,430	22	1,600	18
Fuel and lumber	650	11	591	10	372	6	485	6
Sporting goods	353	6	326	5	380	6	483	6
Department and dime	9	*	80	1	282	4	322	4
Drug	105	2	88	1	137	2	161	2
Liquor	220	4	206	3	282	4	384	4
Filling station	-	-	25	*	332	5	699	8
Surplus	9	*	44	1	39	1	107	1
Other	66	1	98	2				
Total	6,000	100	6,300	100	6,400	100	8,700	100

1/ Nine store types are recognized in this report as retail distributors of charcoal in Wisconsin. These differed slightly in 1955 and 1957, in that grocery chains and independents were separated in 1957 while surplus stores, recognized in 1955, were lumped with the "other" category in 1957.

* Less than 1/2 of 1 percent.

Volume of sales showed a similar trend, with grocery stores reporting a considerable increase in retail charcoal sales (table 2). In 1955 grocers retailed 45 percent of the total sales volume. Hardware stores were next with 25 percent, and fuel and lumber dealers third with 24 percent. In 1957 grocery store sales had increased to 60 percent of the total sales volume. Hardware stores declined slightly to 20 percent, and fuel and lumber dealers reported a sizable drop to 9 percent.

Table 2.--Volume of packaged charcoal sold in Wisconsin by type of retail store, 1954 through 1957

Retail store type	1954		1955		1956		1957	
	Volume	Percent	Volume	Percent	Volume	Percent	Volume	Percent
	Thousand pounds		Thousand pounds		Thousand pounds		Thousand pounds	
Grocery, chain)	961	31	2,483	45	1,307	19	2,420	21
Grocery, independent)					2,110	30	4,548	39
Hardware	775	25	1,376	25	1,045	15	2,385	20
Fuel and lumber	1,042	33	1,328	24	1,158	17	1,092	9
Sporting goods	112	4	102	2	178	2	182	1
Department and dime	3	*	20	1	221	3	209	2
Drug	14	*	13	*	268	4	183	2
Liquor	85	3	92	2	393	6	278	2
Filling station	-	-	3	*	237	3	317	3
Surplus)	20	1	13	*	83	1	86	1
Other)	88	3	70	1				
Total	3,100	100	5,500	100	7,000	100	11,700	100

*Less than 1/2 of 1 percent.

Charcoal Sales By City Size

When estimates of charcoal volume and number of stores selling charcoal are grouped by city size (1950 population), a slight trend in merchandising becomes apparent.

In 1955, as well as 1957, about 70 percent of the total number of stores retailing charcoal in Wisconsin were located in two of the five city-size groups (fig. 1). These two city sizes, communities of 10,000 to 100,000 people and communities of less than 1,000 people, contain approximately 50 percent of Wisconsin's urban population.

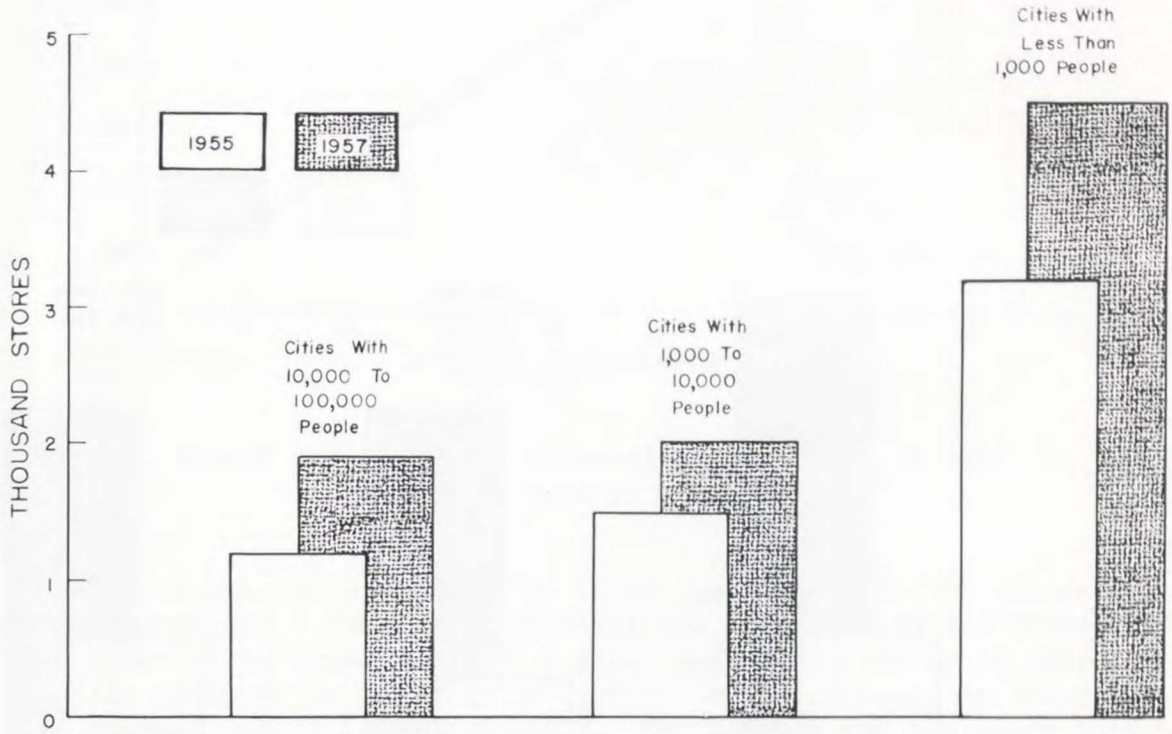

Figure 1.--Number of stores retailing charcoal by city size and year.

In 1955 these two city-size groups sold the same volume of charcoal (fig. 2). Two years later the number of stores selling charcoal in the larger city-size group (10,000 to 100,000 people) had increased 58 percent while sales volume had increased 139 percent. Increases for the smaller city-size group were not nearly so large. This relationship can also be shown on a sales-volume-per-store basis:

City size	Volume of charcoal sold per store		Increase
	1955 (Pounds)	1957 (Pounds)	(Percent)
Cities of 10,000 to 100,000 people	1,500	2,263	51
Cities of less than 1,000 people	562	777	38

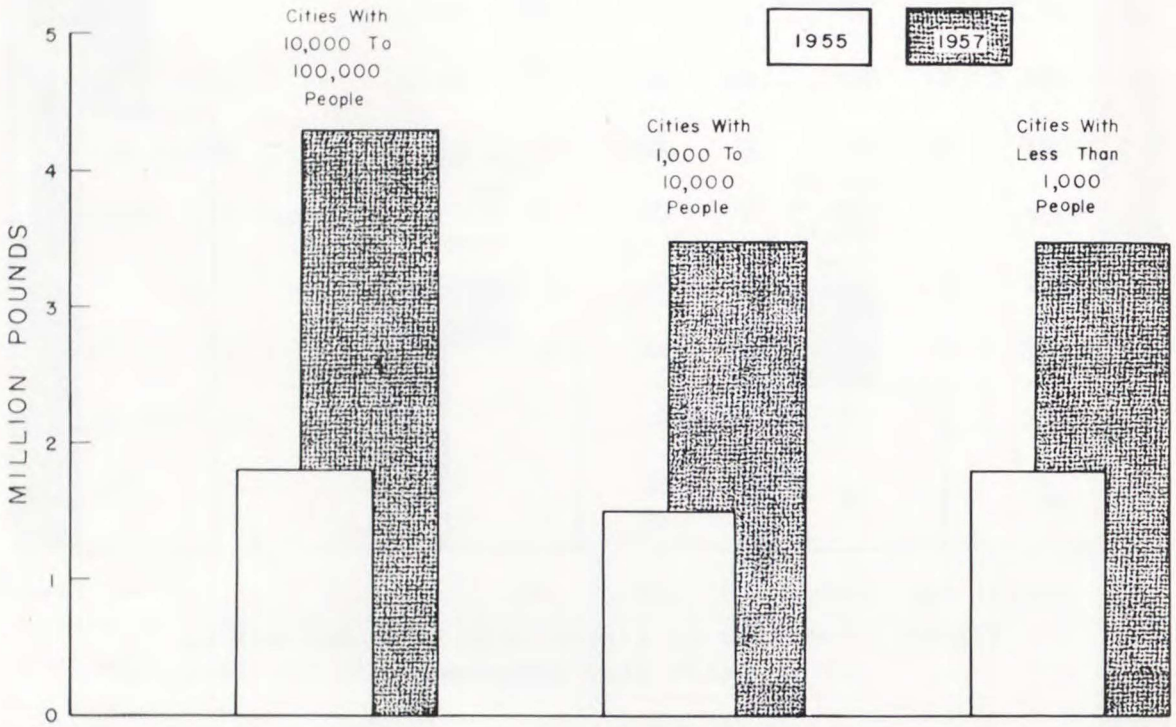

Figure 2.--Charcoal sales volume by city size and year.

There is a strong relation between the 1950 population of a town and the volume of charcoal that its retailers sold in 1957. The value of such regression is that volume estimates of charcoal sales for 1957 may be made for any Wisconsin town by applying a factor to its 1950 population (fig. 3).

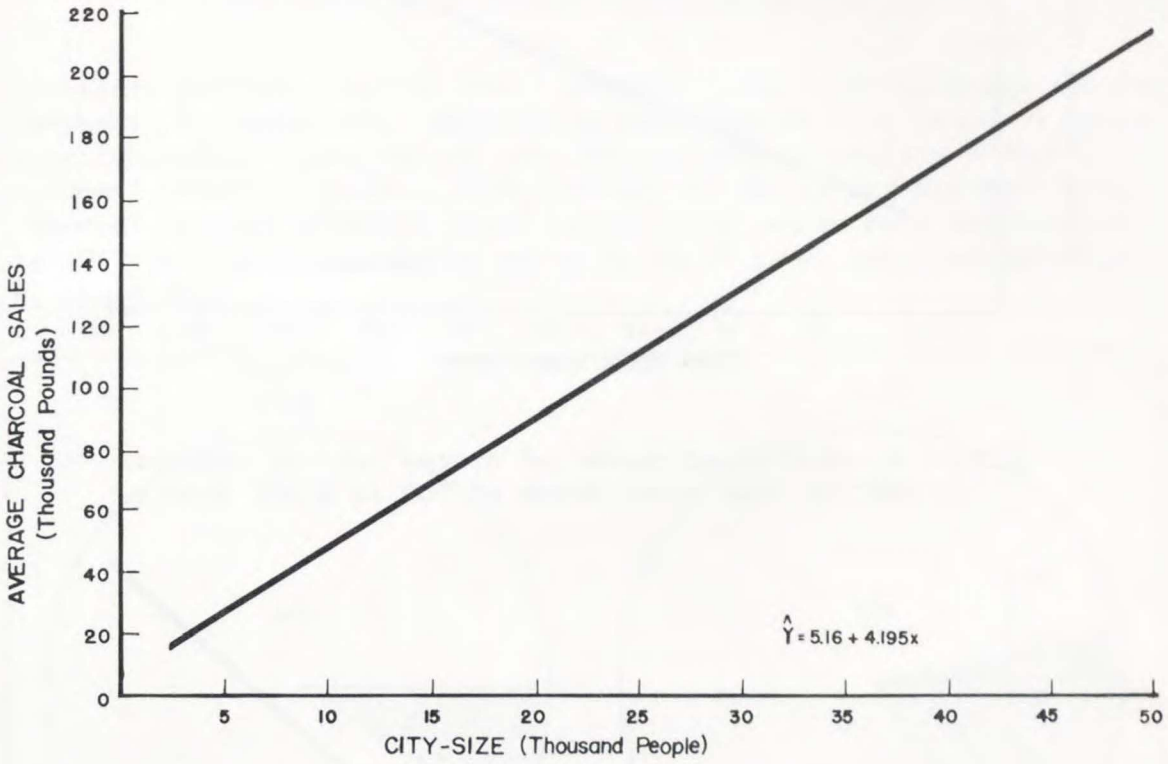

Figure 3.--Estimated charcoal sales volume in 1957 by size of city.

Another relationship of value to those concerned with the charcoal market provides a means of estimating the number of retail stores selling charcoal in a community of a given size. The number of stores selling charcoal is directly related to town population as shown by the regressions in figures 4 and 5. Two figures are presented because two distinct relationships exist--one for towns between 500 and 5,000 people, and the other for towns between 10,000 to 50,000. Data were insufficient to develop this same relationship for towns with populations between 5,000 to 10,000 people.

By using figures 3 and 4, or 3 and 5, the average volume of charcoal sales per store can be estimated for a specific town size.

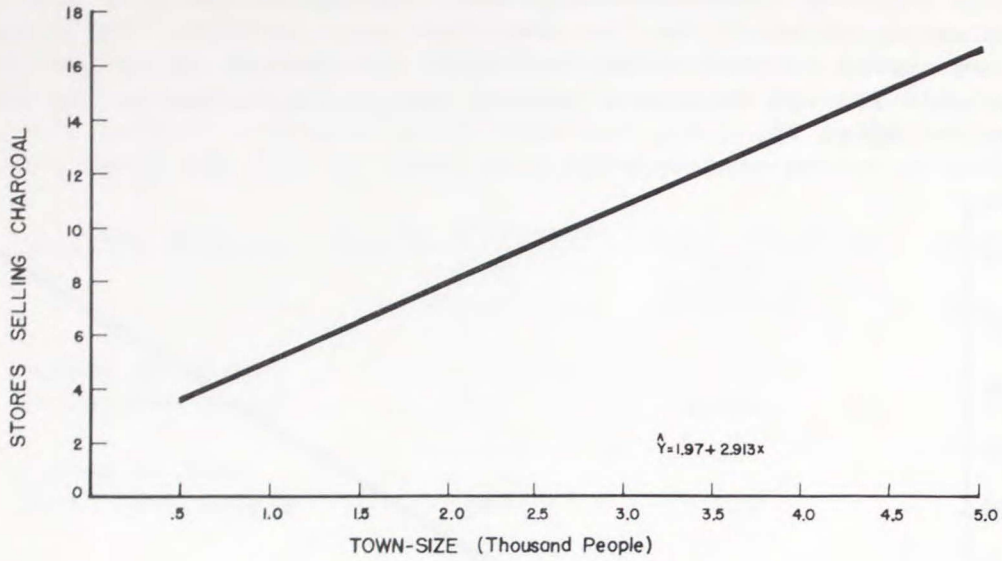

Figure 4.--Estimated number of stores selling charcoal in 1957 by town size; towns of 500 to 5,000 people.

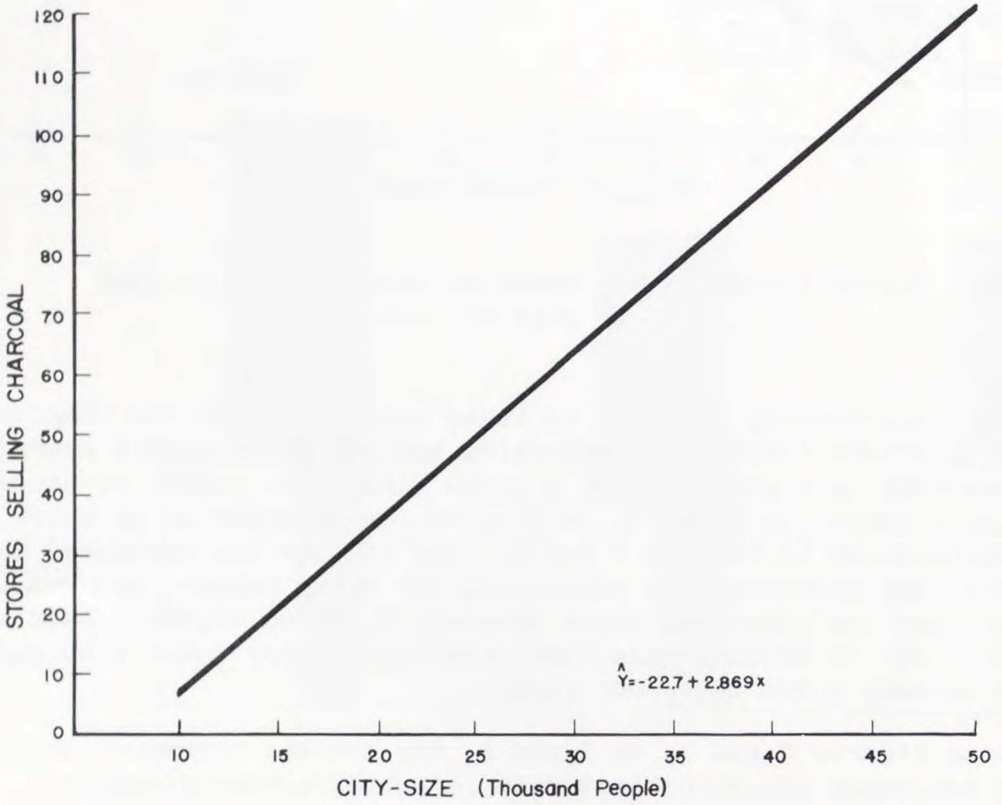

Figure 5.--Estimated number of stores selling charcoal in 1957 by town size; towns of 10,000 to 50,000 people.

Tables 8 to 11 in Appendix B give more detailed data on number of stores selling charcoal and the volume sold in 1955 and 1957 by town size.

Charcoal Distribution By Wholesale Sources

Retailers purchase most of their charcoal from five wholesale sources (Appendix B, table 12). Apparently store owners have found it desirable to contract from two or more wholesalers to satisfy a highly seasonal consumer demand. Nine percent of the stores merchandising charcoal in 1955 obtained their supply from two or more wholesalers. In 1957 this percent had increased to 19 (fig. 6; see also Appendix B, table 13).

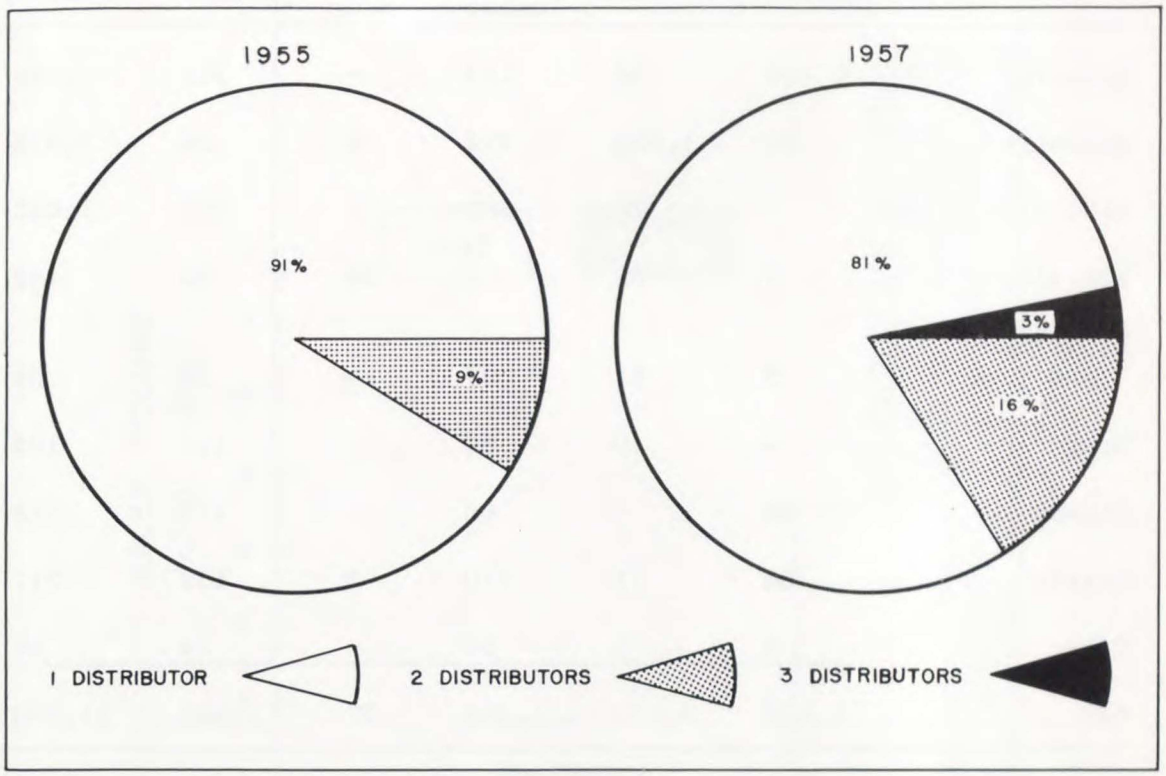

Figure 6.--Proportion of retailers receiving charcoal from 1, 2, or 3 wholesale sources, 1955 and 1957.

The pattern of wholesale distribution is changing. In 1955 and the preceding years, fuel and lumber dealers were the major wholesale distributors of charcoal. They provided retailers with an estimated 50 percent of their sales volume; grocery and hardware wholesalers divided the remainder equally.[7/] Today the grocery wholesaler has taken the lead in charcoal distribution. This group provided retailers with 57 percent of their total sales volume in 1957. Hardware distributors were next with 18 percent, and fuel and lumber suppliers third with 11 percent (table 3).

Table 3.--Volume of packaged charcoal supplied retail stores by type of wholesale distributor, 1957

(Thousand pounds)

Retail store type	Type of wholesaler					
	Grocery	Hardware	Fuel and lumber	Sporting goods	Other	All
Grocery	6,488	34	134	-	312	6,968
Hardware	81	1,838	376	6	84	2,385
Fuel and lumber	-	75	393	-	624	1,092
Sporting goods	1	95	8	28	50	182
Department and dime	3	94	87	-	25	209
Drug	-	19	36	-	128	183
Liquor	39	-	64	-	175	278
Service station	28	17	110	3	159	317
Other	3	1	58	-	24	86
All	6,643	2,173	1,266	37	1,581	11,700

7/ Warner and Lord: See footnote 5.

Consumer Preference For Charcoal Form And Package Size

In producing charcoal, about 15 percent of the volume is broken down into powder as a result of processing and handling. The briquetting process was originally developed to utilize these fines. Today the demand for briquettes has outgrown the supply of fines, consequently a substantial amount of lump charcoal is crushed and pressed into briquettes each year.

In 1955, 83 percent of the charcoal retailed in Wisconsin was in the form of briquettes. Two years later the amount had increased to 91 percent (fig. 7).

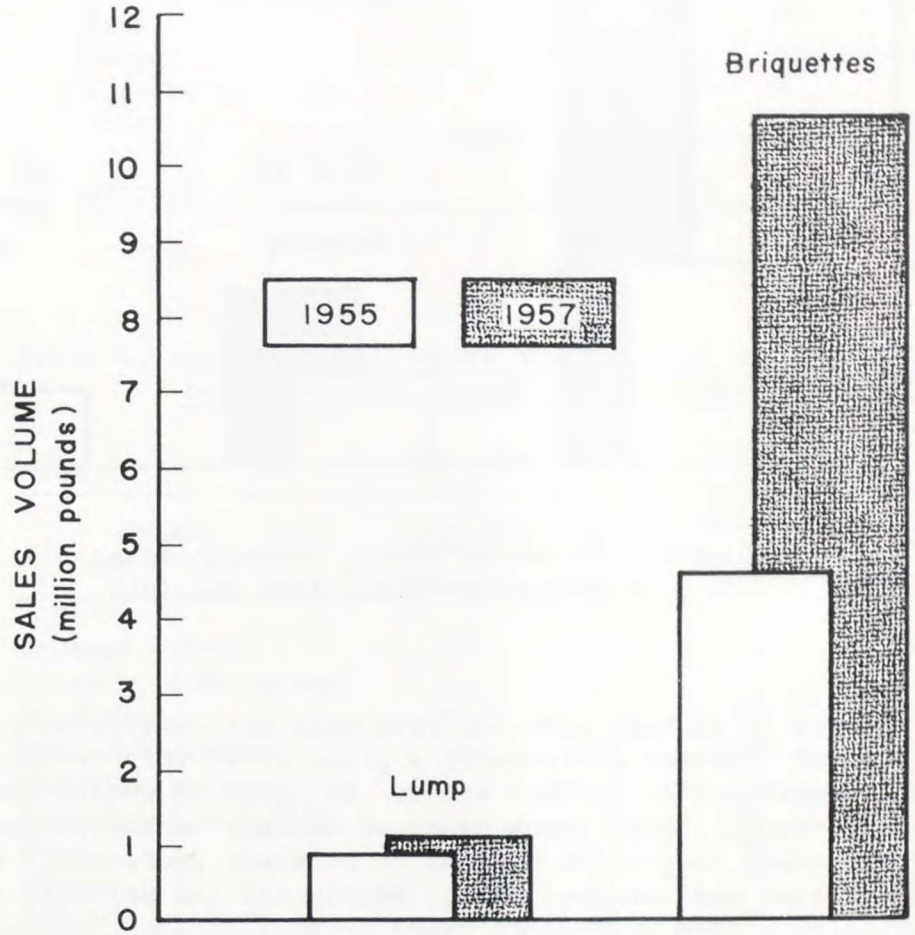

Figure 7.--Volume of retail charcoal sales by form, 1955 and 1957.

Briquette or lump charcoal is available in nearly any size package desired (Appendix B, tables 14-17). However, in 1955 as well as 1957 the amount of charcoal sold in the 10-pound package was greater than the combined volume of all other package sizes (fig. 8).

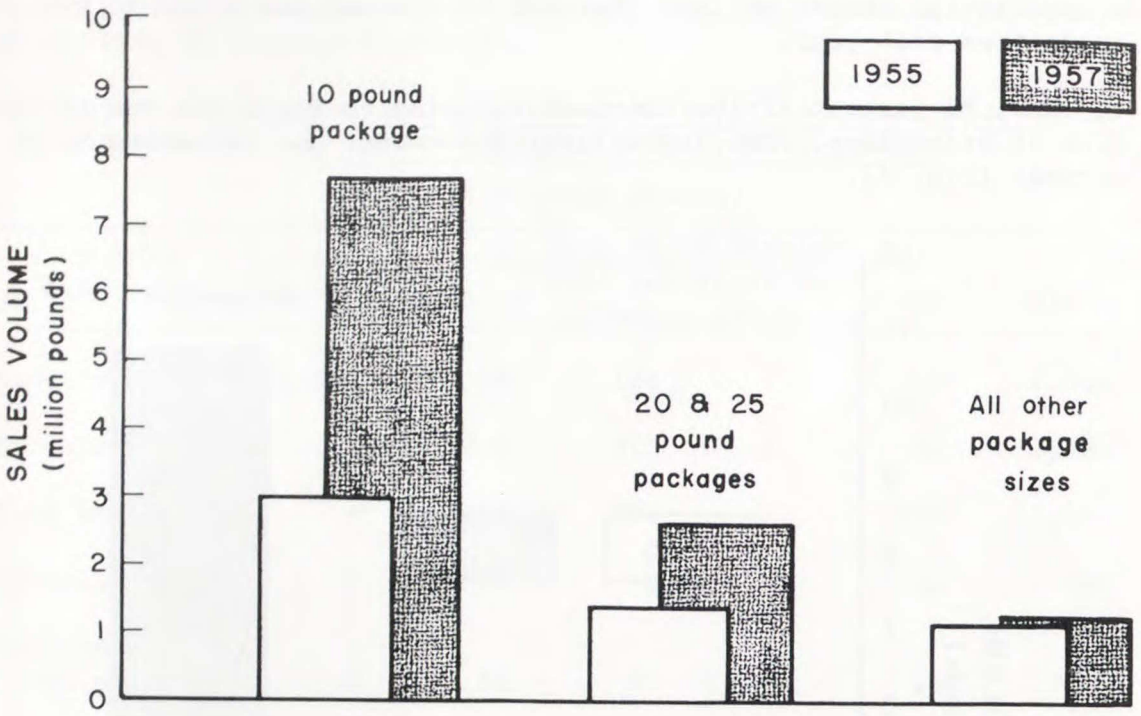

Figure 8.--Volume of retail charcoal sales by package size, 1955 and 1957.

Sales volumes by package size and form were not considered a true reflection of consumer preference; a given store very seldom carries the full complement of package sizes. In order to obtain some estimate of preference, each store owner or manager contacted during the survey was asked to give an opinion on consumer preference, both as to package size and charcoal form. Nearly all (92 percent) of those who indicated a form preference chose briquettes over lump charcoal (table 4). The 10-pound package was preferred by nearly four-fifths of the retailers (table 5).

Table 4.--Consumer preference for charcoal form based on store managers' and owners' opinion

(Percent)

Retail store type	Charcoal form	
	Briquette	Lump
Grocery, chain	89	11
Grocery, independent	94	6
Hardware	95	5
Fuel and lumber	85	15
Sporting goods	100	0
Department and dime	100	0
Drug	92	8
Liquor	96	4
Service station	100	0
Other	97	3
Average	92	8

Table 5.--Consumer preference for charcoal package size based on store managers' and owners' opinion

(Percent)

Retail store type	Package size			
	1 or 2 pounds	5 pounds	10 pounds	25 pounds
Grocery, chain	3	14	78	5
Grocery, independent	1	12	82	5
Hardware	0	0	85	15
Fuel and lumber	6	12	82	0
Sporting goods	11	0	78	11
Department and dime	0	17	83	0
Drug	6	44	44	6
Liquor	0	11	71	18
Service station	0	20	40	40
Other	3	3	84	10
Average	2	12	78	7

Conclusions

The spreading popularity of outdoor cooking in Wisconsin has created a rising demand for packaged charcoal. More than 11½ million pounds of charcoal were sold in 1957 by 8,700 Wisconsin retailers. This was more than double the amount sold in 1955. The number of stores selling charcoal increased 38 percent during this period.

Briquettes in the 10-pound package are the favorite with outdoor chefs. In 1957 nearly two-thirds of the retailed charcoal was sold in 10-pound packages, and more than 90 percent was in the form of briquettes.

Grocery stores sold more charcoal in 1955 and 1957 than did any other single store type. In 1955 they handled 45 percent of the total volume of retailed charcoal; 2 years later they were handling 60 percent of all sales.

Wholesale distribution channels have also been changing. In 1955 the largest wholesaler of charcoal was the fuel and lumber dealer. In 1957 the lead had changed to the grocery wholesaler; nearly 60 percent of the total retail sales volume was handled by this group.

Figures 3, 4, and 5 should prove of interest to wholesalers and retailers. In figure 3 the volume of charcoal retailed in 1957 is estimated from city-size. Armed with this information, along with city populations, a wholesaler could determine the average volume of charcoal that a specific area might use. Figures 4 and 5, which show the relation between the number of stores selling charcoal and city-size, could be used by retailers to determine whether their communities might support another seller of charcoal.

The market for domestic charcoal should continue to rise in the next few years, and the changing distribution channels should begin to stabilize. In order to stay abreast of new developments during these formative years another survey in the near future should be valuable to those concerned with the industry.

Appendix A and B

Appendix A: Study Methods

Owners, managers, or department heads of retail stores in Wisconsin supplied the data on charcoal use. An estimated 48,000 stores in 1,956 communities made up the population from which the sample was drawn (table 6).

Table 6.--Population strata used in estimating Wisconsin domestic charcoal consumption, 1955 and 1957.

Strata	Population range 1/	Average population	Total population	Percent of total population	Number of communities
I 2/	Over 100,000	8,400	637,392	26.5	1
II	10,000 to 100,000	28,600	944,292	39.3	33
III	2,500 to 10,000	4,600	339,857	14.1	74
IV	1,000 to 2,500	1,490	190,588	7.9	128
V	Under 1,000	170	291,734	12.2	1,720

1/ Based on 1950 census of population.

2/ Milwaukee is the only city in this group; however, it was divided into 76 segments for sampling; average population of these segments was 8,400.

Pretests over a range of community sizes had shown enough variation to indicate that stratification would improve the estimates. Accordingly, all Wisconsin communities were divided into five strata based on population. Thirty-eight towns were randomly selected from strata II through V and canvassed completely in the 1955 survey for stores selling charcoal. The same towns were again canvassed for the 1957 survey. Stratum I, consisting of Milwaukee only, was sampled somewhat differently. The city was divided into 76 sampling units of 56 city blocks each. Each unit was in the shape of a wedge extending from the central business district to the outskirts of the city. Ten of the 56-block units were randomly selected and canvassed for the 1955 data. Because nine different units were sampled in 1957, the data presented for Milwaukee in 1955 and 1957 are not strictly comparable. Table 7 shows sampling intensity by number of segments for stratum I, the number of towns in the sample for other strata, and the sampling error associated with each stratum.

Table 7.--Sampling intensity and sampling error in estimating charcoal consumption in Wisconsin, 1955 and 1957

Strata	Number of towns in sample		Sampling error (in percent)	
	1955	1957	1955	1957
I	10 1/	9 1/	13	45
II	6	6	10	10
III	5	5	19	16
IV	8	8	19	20
V	19	19	29	39
All strata			9.71	10.37

1/ Each sample in this stratum was a 56-city-block segment of Milwaukee.

Wisconsin's population in 1950 was 3,434,575. The towns grouped in the five strata have a population of 2,403,863 persons, indicating that more than a million people are rural inhabitants.[8/] Reconnaissance of these rural areas produced so small a number of retail stores that they have been omitted.

The study results stress the years of 1955 and 1957 because these are the years for which current data were gathered. The 1954 and 1956 data were based on year-old estimates made by the retailers interviewed at the end of 1955 and 1957.

8/ The Rand McNally Commercial Atlas and Marketing Guide, 85th edition, N. Y., 1954, was used to tabulate towns and record populations. Towns making up table 6 in the Appendix include communities with as few as five inhabitants.

Appendix B: Supplementary Tables

Table 8.--Volume of packaged charcoal sold in Wisconsin by type of retail store within town-size strata, 1955

(Thousand pounds)

Retail store type	Town-size strata: Over 100,000 people 1/	10,000 to 100,000 people	2,500 to 10,000 people	1,000 to 2,500 people	Under 1,000 people	Total volume	Percent
Grocery, chain) Grocery, independent)		694	402	237	1,006	2,483	45.1
Hardware		487	315	150	369	1,376	25.0
Fuel and lumber		369	278	94	425	1,328	24.2
Sporting goods		82	-	18	-	102	1.8
Department and dime		16	-	1	-	20	0.4
Drug		9	-	-	-	13	0.2
Liquor		85	-	-	-	92	1.7
Filling station		1	-	-	-	3	0.1
Surplus		4	-	-	-	13	0.2
Other		53	5	-	-	70	1.3
Total	400	1,800	1,000	500	1,800	5,500	100.0
Percent	7.3	32.7	18.2	9.1	32.7	100.0	

1/ Data for 1955 and 1957 are not comparable for this stratum.

Table 9.--Number of stores selling packaged charcoal in Wisconsin by type of retail store within town-size strata, 1955

Retail store type	Town-size strata: Over 100,000 people 1/	10,000 to 100,000 people	2,500 to 10,000 people	1,000 to 2,500 people	Under 1,000 people	Total no.of stores	Percent
Grocery, chain) Grocery, independent)		626	386	317	1,600	3,167	50.3
Hardware		243	386	183	1,018	1,905	30.2
Fuel and lumber		99	112	67	582	873	13.9
Sporting goods		93	-	27	-	133	2.1
Department and dime		17	-	6	-	30	0.5
Drug		23	-	-	-	36	0.6
Liquor		58	-	-	-	78	1.2
Filling station		6	-	-	-	13	0.2
Surplus		12	-	-	-	19	0.3
Other		23	16	-	-	46	0.7
Total	400	1,200	900	600	3,200	6,300	100.0
Percent	6.3	19.1	14.3	9.5	50.8	100.0	

1/ Data for 1955 and 1957 are not comparable for this stratum.

Table 10.--Volume of packaged charcoal sold in Wisconsin by type of retail store within town-size strata, 1957

(Thousand pounds)

Retail store type	Town-size strata: Over 100,000 people[1/]	10,000 to 100,000 people	2,500 to 10,000 people	1,000 to 2,500 people	Under 1,000 people	Total volume	Percent
Grocery, chain		1,323	870	-	-	2,420	20.7
Grocery, independent		1,207	556	700	2,020	4,548	38.9
Hardware		482	387	191	1,304	2,385	20.4
Fuel and lumber		281	395	192	164	1,092	9.3
Sporting goods		124	25	12	12	182	1.5
Department and dime		167	27	-	-	209	1.8
Drug		182	1	-	-	183	1.6
Liquor		270	*	5	-	278	2.4
Filling station		178	139	-	-	317	2.7
Surplus) Other)		86	-	-	-	86	0.7
Total	400	4,300	2,400	1,100	3,500	11,700	100.0
Percent	3.4	36.8	20.5	9.4	29.9	100.0	

1/ Data for 1955 and 1957 are not comparable for this stratum.
* Less than 500 pounds.

Table 11.--Number of stores selling packaged charcoal in Wisconsin by type of retail store within town-size strata, 1957

Retail store type	Town-size strata: Over 100,000 people[1/]	10,000 to 100,000 people	2,500 to 10,000 people	1,000 to 2,500 people	Under 1,000 people	Total no. of stores	Percent
Grocery, chain		210	94	-	-	336	3.9
Grocery, independent		734	235	710	2,957	4,806	55.2
Hardware		253	271	294	1,157	2,032	23.4
Fuel and lumber		78	94	98	257	528	6.1
Sporting goods		126	12	73	129	356	4.1
Department and dime		90	23	-	-	129	1.5
Drug		48	12	-	-	60	0.7
Liquor		115	12	25	-	160	1.8
Filling station		210	47	-	-	257	2.9
Surplus) Other)		36	-	-	-	36	0.4
Total	400	1,900	800	1,200	4,500	8,700	100.0
Percent	3.5	21.8	9.2	13.8	51.7	100.0	

1/ Data for 1955 and 1957 are not comparable for this stratum.

Table 12.--Percent of retail stores in Wisconsin supplied by specific wholesale distributors, 1955 and 1957

Retail store type	Type of wholesale distributor											
	Grocery		Hardware		Fuel and lumber		Sporting goods		Drug		Other	
	1955	1957	1955	1957	1955	1957	1955	1957	1955	1957	1955	1957
Grocery, chain	72	84	2	4	16	6	1	-	-	-	9	6
Grocery, independent		82		1		3		-		1		13
Hardware	4	8	78	71	15	12	1	1	-	-	2	8
Fuel and lumber	-	2	7	10	93	41	-	-	-	-	-	47
Sporting goods	-	4	65	49	-	10	29	17	-	-	6	20
Department and dime	-	6	75	33	-	39	-	-	-	-	25	22
Drug	-	-	40	17	-	30	-	-	60	17	-	36
Liquor	7	24	7	-	66	31	-	-	-	3	20	42
Service station	-	11	100	11	-	29	-	2	-	-	-	47
Surplus	-	17	100	17	-	33	-	-	-	-	-	33
Other	38		5		14		-		-		43	
Total	38	46	26	20	24	13	2	1	1	1	9	19

Table 13.--Percent of retail stores in Wisconsin supplied by 1, 2, and 3 wholesale distributors for 1955 and 1957

Retail store type	1955[1/]			1957		
	Number of distributors			Number of distributors		
	1	2	3	1	2	3
Grocery, chain	90	9	1	74	22	4
Grocery, independent				84	14	2
Hardware	89	11	-	78	19	3
Fuel and lumber	100	-	-	96	4	-
Sporting goods	94	6	-	77	23	-
Department and dime	100	-	-	83	17	-
Drug	100	-	-	67	22	11
Liquor	75	25	-	59	36	5
Service station	100	-	-	87	8	5
Surplus	100	-	-	100	-	-
Other	100	-	-			
Total	91	9	(1/)	81	16	3

1/ 1955 retailer response was not 100 percent.

Table 14.--Volume of packaged charcoal briquettes sold in Wisconsin by retail store type and package size, 1955

(Thousand pounds)

Retail store type	Package size					Total
	Less than 5 pounds	10 pounds	20 & 25 pounds	40 & 50 pounds	Over 50 pounds	
Grocery, chain) Grocery, independent)	63	1,194	587	49	155	2,048
Hardware	*	896	152	36	92	1,176
Fuel and lumber	*	458	502	107	44	1,111
Sporting goods	-	51	22	-	4	77
Department and dime	-	11	5	-	1	17
Drug	5	4	1	-	*	10
Liquor	-	39	21	-	16	76
Service station	-	3	-	-	-	3
Surplus	-	11	2	-	-	13
Other	-	20	40	1	-	61
Total	68	2,687	1,332	193	312	4,592

*Less than 500 pounds

Table 15.--Volume of packaged lump charcoal sold in Wisconsin by retail store type and package size, 1955

(Thousand pounds)

Retail store type	Package size					Total
	Less than 5 pounds	10 pounds	20 & 25 pounds	40 & 50 pounds	Over 50 pounds	
Grocery, chain) Grocery, independent)	-	126	-	-	309	435
Hardware	-	26	17	-	157	200
Fuel and lumber	-	33	11	-	173	217
Sporting goods	-	3	-	-	22	25
Department and dime	-	3	-	-	-	3
Drug	-	-	-	-	3	3
Liquor	-	-	-	-	16	16
Service station	-	-	-	-	-	-
Surplus	-	-	-	-	-	-
Other	-	-	-	-	9	9
Total	-	191	28	-	689	908

Table 16.--Volume of packaged charcoal briquettes sold in Wisconsin by retail store type and package size, 1957

(Thousand pounds)

Retail store type	Package size					Total
	Less than 5 pounds	10 pounds	20 & 25 pounds	40 & 45 pounds	Over 50 pounds	
Grocery, chain	90	1,767	425	2	55	2,339
Grocery, independent	129	2,299	1,002	50	449	3,929
Hardware	1	1,615	427	26	153	2,222
Fuel and lumber	-	506	405	35	57	1,003
Sporting goods	5	111	12	1	15	144
Department and dime	1	147	35	-	25	208
Drug	5	163	4	6	5	183
Liquor	4	166	50	2	36	258
Service station	1	177	70	4	9	261
Surplus) Other)	-	21	56	-	8	85
Total	236	6,972	2,486	126	812	10,632

Table 17.--Volume of packaged lump charcoal sold in Wisconsin by retail store type and package size, 1957

(Thousand pounds)

Retail store type	Package size					Total
	Less than 5 pounds	10 pounds	20 & 25 pounds	40 & 50 pounds	Over 50 pounds	
Grocery, chain	-	80	-	-	1	81
Grocery, independent	-	443	4	-	172	619
Hardware	-	54	17	-	92	163
Fuel and lumber	-	14	75	-	-	89
Sporting goods	-	28	3	-	7	38
Department and dime	-	-	-	-	1	1
Drug	-	-	-	-	-	-
Liquor	-	7	5	-	8	20
Service station	-	53	*	-	3	56
Surplus) Other)	-	1	-	-	-	1
Total	-	680	104	-	284	1,068

* Less than 500 pounds.

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